

SYSC 4701 [0.5 credit] (formerly 94.471\*)

### Communications Systems Lab

Project-oriented level experience in the design of communication systems to meet user requirements. Lectures on queuing theory and teletraffic analysis; system specification and design: requirements analysis, solution alternatives, evaluation of alternative technologies, design, costing, implementation, test.

Prerequisite: registration in fourth-year Communications Engineering.

Lectures two hours a week, laboratory four hours a week.

SYSC 4800 [0.5 credit] (formerly 94.480\*)

### Computer Systems Design Lab

Review of software lifecycles and requirements analysis. Software design, with emphasis on methods for real-time systems. Testing, verification and validation, quality assurance and control. Project planning and management. Maintenance and configuration management. Software reuse during design and maintenance.

Prerequisites: SYSC 3303 (can be taken concurrently) and SYSC 3100.

Lectures three hours a week, laboratory three hours alternate weeks.

SYSC 4805 [0.5 credit] (formerly 94.485\*)

### Computer Systems Design Laboratory

Developing professional-level expertise in selected, important areas of the field by applying, honing, integrating, and extending previously acquired knowledge in team projects in the laboratory. Lecture periods are devoted to new knowledge required for the selected areas, to project-related issues, and to student presentations.

Prerequisites: SYSC 3303, SYSC 3601 or ELEC 4601, and SYSC 4800 and registration in fourth-year Computer Systems Engineering (students are encouraged to enrol in both SYSC 4800 AND 4805 in the same academic year). Lectures two hours a week, laboratory four hours a week.

SYSC 4806 [0.5 credit] (formerly 94.486\*)

### Software Engineering Lab

Applying the full spectrum of engineering and programming knowledge acquired in the program through team projects in the laboratory. Practice in doing presentations and reviews. Lectures will discuss software engineering issues as they relate to the projects, from a mature point of view.

Prerequisite: SYSC 3303 and SYSC 4800.

Lectures two hours a week, laboratory four hours a week.

SYSC 4905 [1.0 credit] (formerly 94.495)

SYSC 4907 [1.0 credit] (formerly 94.497)

SYSC 4908 [1.0 credit] (formerly 94.498)

SYSC 4909 [1.0 credit] (formerly 94.499)

### Engineering Project

Student teams develop professional-level experience by applying, honing, integrating and extending previously acquired knowledge in a major design project. Lectures are devoted to discussing project-related issues and student presentations. A project proposal, interim report, oral presentations, and a comprehensive final report are required.

Prerequisites: fourth-year registration and SYSC 3905 (may be taken concurrently). Certain projects may have additional prerequisites or corequisites.

Lecture one hour a week, laboratory seven hours a week

SYSC 4906 [0.5 credit] (formerly 94.496\*)

### Special Topics

At the discretion of the Department, a course dealing with selected advanced topics of interest to students in Communications, Computer Systems, Electrical and Software Engineering and Engineering Physics may be offered. (Also listed as ELEC 4906.)

Prerequisite: permission of the Department.

## Technology, Society, Environment Studies (TSES)

Technology, Society, Environment Studies Committee

Faculties of Arts and Social Sciences, Engineering and Design, Public Affairs and Management, Science

TSES 2006 [0.5 credit]

### Ecology and Culture

Cultural adaptations to the environment are set within globalization processes. New ecologies – symbolic, historical and political – arise out of the hubris of classical models. The advocacy role of applied ecological anthropology and the consequences of Western cultures' adaptive capacities will be examined. (Also listed as ANTH 2006.)

Prerequisite: one of SOCI 1000, ANTH 1000, SOAN 1000 or equivalent.

Lectures three hours a week.

TSES 2305 [1.0 credit] (formerly 59.235)

### Ancient Science and Technology

Development of science and technology in the ancient world and their practical application. The craftsman and artisan in society; the attitude of intellectuals to science and manual labour. Effects of the institution of slavery. Suitable for students with no previous knowledge of Greece or Rome. (Also listed as CLCV 2305.)

Prerequisite: second-year standing or equivalent.

Lectures two hours a week.

TSES 3001 [0.5 credit] (formerly 59.301\*)

### Technology-Society Interactions

Ethical issues in introducing technology; historical review of technology and human development; effects on society of medical and communications technologies; automation and its effects on society, especially work; impact of technology on international affairs, especially through multinational enterprises. Guest lectures.

Precludes additional credit for TSES 3000 and TSES 3500.

Prerequisite: at least second-year standing.

Lectures and workshops three hours per week.

TSES 3002 [0.5 credit] (formerly 59.302\*)

### Energy and Sustainability

History of energy use by humans; utilization of renewable energy sources; energy and agriculture; energy and mineral resources; options for electricity generation; nuclear energy; risks of accidents in large systems, e.g. nuclear plants, hydroelectric dams. Guest lectures.

Precludes additional credit for TSES 3000 and TSES 3500.

Prerequisites: at least second-year standing.

Lectures and workshops three hours per week.

TSES 3500 [0.5 credit] (formerly 59.350\*)

### Interactions in Industrial Society

Ethical issues involving technology; effects on society of automation, medical and communications technologies; technology and international affairs; energy use by humans; renewable energy sources; energy in agriculture and mineral extraction; electricity generation; nuclear energy; accidents in large systems, e.g. nuclear plants and hydroelectric dams. Guest lecturers. Lectures in common with TSES 3001 and TSES 3002.

Precludes additional credit for TSES 3001, TSES 3002 and TSES 3000.

Prerequisites: at least second-year standing.

Lectures three hours per week for both terms.

TSES 4001 [0.5 credit] (formerly 59.401\*)

### Technology and Society: Risk

Examines the complex practice of evaluating technology's impact on society and the environment; risk analysis; cost-benefit analysis; technology regulation; retrospective project assessment; necessary aspects of assessment and

assessment examples. Guest lecturers. Prerequisite: third-year standing or equivalent.

Lectures and workshops three hours a week.

TSES 4002 [0.5 credit] (formerly 59.402\*)

**Technology and Society: Forecasting**

Methods used for forecasting technological and social change; factors involved in such change. Guest lecturers.

Prerequisite: third-year standing or equivalent.

Lectures and workshops three hours a week.

TSES 4003 [0.5 credit] (formerly 59.403\*)

**Technology and Society: Innovation**

Technological and social innovation, especially in Canada: historical examples; the relation of innovation to economic development; analysis of the steps involved; effect on employment; impediments and incentives. Guest lecturers.

Prerequisite: third-year standing or equivalent.

Lectures and seminars three hours a week.

TSES 4005 [0.5 credit] (formerly 59.405\*)

**Information Technology and Society**

Investigation of the human and social impacts of electronic information and communication on our working, educational, and personal lives from various disciplinary perspectives; problem issues and competing values in the creation, manipulation, dissemination, and control of information are identified; resolution initiatives encouraged. Guest lecturers.

Prerequisite: third-year standing or equivalent.

Lectures and seminars three hours a week.

TSES 4006 [0.5 credit] (formerly 59.406\*)

**Technology and Society: Work**

Explores the relationship between technology, employment and the individual; work organizations; employment restructuring; rural/urban split; the impact of information technologies; demographic impacts and globalization; Canadian issues and public policy explored. Guest lecturers.

Prerequisite: third-year standing or equivalent.

Lectures and workshops three hours a week.

TSES 4007 [0.5 credit] (formerly 59.407\*)

**Product Life Cycle Analysis**

Life cycle analysis of products and processes, from resource extraction through design and use to waste management or recycling; social and environmental implications of product design and use; how we value material objects and the environment; consumerism; evolution of design. Guest lecturers.

Prerequisite: third-year standing or equivalent.

Lectures and workshops three hours a week.

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## Women's Studies (WOMN)

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Pauline Jewett Institute of Women's Studies

Faculty of Arts and Social Sciences

WOMN 1808 [1.0 credit] (formerly 09.188)

**Introduction to Women's Studies**

This survey course provides an overview of the major issues in Women's Studies. Topics include the social construction of femininity and masculinity, violence, sexuality, representations of women, the treatment of women in the workplace and in education, women and the arts, and women's health.

Precludes additional credit for WOMN 2808.

Lectures and discussion three hours a week.

WOMN 2800 [0.5 credit] (formerly 09.280\*)

**Gender and Diversity**

This course examines the ways gender interacts with race, class, ethnicity, sexual orientation, ability and other axes of difference to affect women's experiences. The course incorporates the voices of many women and analyses the challenges these voices raise for key institutions in Canadian society.

Prerequisite: WOMN 1808 or FYSM 1402 or FYSM 1403 or SOAN 1001 or permission of the Institute of Women's Studies.

Lectures and discussion three hours a week.

WOMN 2801 [0.5 credit] (formerly 09.281\*)

**Interdisciplinary Perspectives on Women's Activism**

A comparative, interdisciplinary examination of women's attempts to effect social and political change in the modern era. A range of perspectives and materials are used to examine the objectives, scope and impact of women's activism in different historical, cultural and national settings.

Prerequisite: second-year standing.

Lectures and discussion three hours a week.

WOMN 2802 [0.5 credit] (formerly 09.282\*)

**Topics in Women's Studies**

An interdisciplinary analysis of one or more topics in Women's Studies.

Prerequisite: WOMN 1808 or FYSM 1402 or FYSM 1403.

Lectures and discussion three hours a week.

WOMN 3002 [1.0 credit] (formerly 09.302)

**Gender and Literature**

Study of autobiographical writing, novels, short stories, and poetry by women writing in the 1970s, 1980s, and 1990s in a variety of cultural settings. Cross-cultural point of view informed by poststructuralist feminist criticism. All texts available in English translation. Also listed as CLST 3002.

Prerequisite: second-year standing or permission of the Institute of Women's Studies.

Seminar three hours a week.

WOMN 3003 [0.5 credit]

**Selected Topics in Gender and Women's Studies**

An interdisciplinary analysis of one or more topics in Gender and Women's Studies.

Prerequisite: third-year standing and 1.0 credit in courses with substantial gender or women's studies material.

Seminar three hours a week.

WOMN 3808 [1.0 credit] (formerly 09.388)

**Theory and Methods from a Feminist Perspective**

Exploration of emerging feminist literatures in the humanities and in the social, natural and applied sciences. Feminist critiques of prevailing approaches to knowledge and feminist contributions to the development of theory and method are considered.

Prerequisites: third-year standing, and WOMN 1808 or FYSM 1402 or FYSM 1403.

Lectures and discussion three hours a week.

WOMN 4900 [0.5 credit] (formerly 09.490\*)

**Independent Study**